

AMENDMENTS TO THE CLAIMS

1. (Original) A cathode ray tube with a panel, the panel comprising:
an inside surface having a designated curvature;
a central portion having a transmission rate of 45-75%;
an outside surface being substantially flat with a flatness ratio (F) satisfying a mathematical formula of $F = \frac{Ro}{Sd \times 1.767}$, where Ro denotes a diagonal curvature radius of the outside surface, Sd denotes a diagonal length of an effective surface of the panel, and the flatness ratio (F) of the outside surface is greater than 17; and
a thickness at the central portion of the panel (CFT), a thickness of a vertical axis end (Tv), and a thickness of a diagonal end (Td), wherein CFT, Tv, and Td satisfy conditions of $1.4 < Td/CFT < 2.2$ and $0.85 < Tv/Td < 1.0$.
2. (Original) The cathode ray tube as claimed in claim 1, satisfying a condition of $0.13 < OAH/Sd < 0.17$, wherein OAH denotes a length of a skirt portion of the panel and Sd denotes the diagonal length of the effective surface.
3. (Original) The cathode ray tube as claimed in claim 1, wherein a diagonal curvature radius (Rd) of the inside surface of the panel satisfies a relation of $2.0R < Rd < 4.5R$, wherein $1R = 1.767 \times Sd$.
4. (Original) The cathode ray tube as claimed in claim 3, wherein a vertical curvature radius of the inside surface of the panel, Rv, and a horizontal curvature radius of the inside surface of the panel, Rh, satisfy a relation of $3.0R < Rh < 6.5R$ and $1.2R < Rv < 3.5R$, respectively, wherein $1R = 1.767 \times Sd$.
5. (Original) The cathode ray tube as claimed in claim 1, satisfying conditions of $10\text{mm} < (Td - CFT) < 15\text{mm}$, $4\text{mm} < (Th - CFT) < 8\text{mm}$, and $8\text{mm} < (Tv - CFT) < 12\text{mm}$, wherein Th denotes a thickness of a horizontal axis end of the panel.

6. (Original) The cathode ray tube as claimed in claim 1, wherein each thickness of the panel satisfies conditions of $1.4 < Td/CFT < 2.0$ and $0.93 < Tv/Td < 1.0$.

7. (Original) The cathode ray tube as claimed in claim 6, satisfying a condition of $0.146 < OAH/Sd < 0.17$, where OAH denotes a length of a skirt portion of the panel.

8. (Original) The cathode ray tube as claimed in claim 6, wherein a diagonal curvature radius (Rd) of the inside surface of the panel satisfies a relation of $2.0R < Rd < 4.5R$, where $1R = 1.767 \times Sd$.

9. (Original) The cathode ray tube as claimed in claim 8, wherein a vertical curvature radius of the inside surface of the panel, Rv, and a horizontal curvature radius of the inside surface of the panel, Rh, satisfy a relation of $3.0R < Rh < 6.5R$ and $1.2R < Rv < 3.5R$, respectively, where $1R = 1.767 \times Sd$.

10. (Currently Amended) The cathode ray tube as claimed in claim 6, wherein the panel satisfies ~~satisfys~~ conditions of $10\text{mm} < (Td - CFT) < 15\text{mm}$, $4\text{mm} < (Th - CFT) < 8\text{mm}$, and $8\text{mm} < (Tv - CFT) < 12\text{mm}$, wherein Th denotes a thickness of a horizontal axis end of the panel.

11. (Original) A cathode ray tube with a panel, the panel comprising:
 a central portion having a transmission rate of 45-75%;
 an outside surface being substantially flat with a flatness ratio (F) satisfying a mathematical formula of $F = \frac{Ro}{Sd \times 1.767}$, where Ro denotes a diagonal curvature radius of the outside surface, Sd denotes a diagonal length of an effective surface of the panel, and the flatness ratio (F) of the outside surface is greater than 17; and
 an inside surface having a designated curvature, in which a diagonal curvature radius of the inside surface (Rd), a vertical curvature radius of the inside surface (Rv), and a horizontal curvature radius of the inside surface (Rh), wherein Rd, Rv, and Rh satisfy conditions of $1.0 < Rh/Rd < 1.9$ and $0.3 < Rv/Rd < 0.9$.

12. (Currently Amended) The cathode ray tube as claimed in claim 11, wherein the panel satisfies satisfies a condition of $0.13 < \text{OAH}/S_d < 0.17$, where OAH denotes a length of a skirt portion of the panel.

13. (Original) The cathode ray tube as claimed in claim 11, wherein R_d satisfies a relation of $2.0R < R_d < 4.5R$, where $1R = 1.767 \times S_d$.

14. (Original) The cathode ray tube as claimed in claim 13, wherein R_v and R_h satisfy a relation of $3.0R < R_h < 6.5R$ and $1.2R < R_v < 3.5R$, respectively, where $1R = 1.767 \times S_d$.

15. (Currently Amended) The cathode ray tube as claimed in claim 11, wherein the panel satisfies satisfies conditions of $10\text{mm} < (T_d - \text{CFT}) < 15\text{mm}$, $4\text{mm} < (T_h - \text{CFT}) < 8\text{mm}$, and $8\text{mm} < (T_v - \text{CFT}) < 12\text{mm}$, wherein CFT denotes a thickness of a central portion of the panel; T_v denotes a thickness of a vertical axis end of the panel; T_d denotes a thickness of a diagonal end of the panel; and T_h denotes a thickness of a horizontal axis end of the panel.

16. (Original) The cathode ray tube as claimed in claim 11, wherein the radii R_d , R_v , and R_h satisfy a relation of $R_v < R_d < R_h$.

17. (Original) The cathode ray tube as claimed in claim 11, wherein the radii R_h , R_d , and R_v of the panel satisfy the conditions of $1.0 < R_h/R_d < 1.3$ and $0.3 < R_v/R_d < 0.9$.

18. (Currently Amended) The cathode ray tube as claimed in claim 17, wherein the panel satisfies satisfies a condition of $0.146 < \text{OAH}/S_d < 0.17$, wherein OAH denotes a length of a skirt portion of the panel.

19. (Original) The cathode ray tube as claimed in claim 17, wherein the radius R_d satisfies a relation of $2.0R < R_d < 4.5R$, wherein $1R = 1.767 \times S_d$.

20. (Original) The cathode ray tube as claimed in claim 19, wherein R_h and R_v satisfy a relation of $3.0R < R_h < 6.5R$ and $1.2R < R_v < 3.5R$, respectively, wherein $1R = 1.767 \times Sd$.

21. (Original) The cathode ray tube as claimed in claims 17, wherein the panel satisfies conditions of $10\text{mm} < (T_d - \text{CFT}) < 15\text{mm}$, $4\text{mm} < (T_h - \text{CFT}) < 8\text{mm}$, and $8\text{mm} < (T_v - \text{CFT}) < 12\text{mm}$, wherein CFT denotes a thickness of a central portion of the panel; T_v denotes a thickness of a vertical axis end of the panel; T_d denotes a thickness of a diagonal end of the panel; and T_h denotes a thickness of a horizontal axis end of the panel.

22. (Original) The cathode ray tube as claimed in claim 17, wherein the radii R_d , R_v , and R_h satisfy a relation of $R_v < R_d < R_h$.

23-32. (Canceled)